

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(Currently Amended)** An electrical ~~Electrical~~ machine forming an actuator or generator, comprising an active part ~~with~~ that includes one or several phases designed to be connected to an electrical source or load, and a passive part, the active part and passive part ~~these two parts~~ being free to move with respect to each other, the active part including a global solenoid winding ~~(110, 210, 310)~~ for each phase and including ~~comprising~~ a stack of ferromagnetic or non-magnetic parts (400) and magnetized parts (500) inside the ~~this or these~~ windings, the magnetized parts having magnetization directions parallel to a ~~the~~ relative displacement direction and successive magnetization directions opposite to each other, the ferromagnetic or non-magnetic parts of the ~~this~~ stack including ~~being provided with~~ passages that ~~each carrying~~ at least one element (600) free to slide with respect to the active part, the ~~this or these~~ sliding elements forming the passive part, each sliding element including a succession of alternating ~~alternately~~ magnetic portions (620) and non-magnetic portions (630) arranged to be facing the different magnetized or non-magnetized parts of the stack one after the other, such that an alternating magnetic flux is generated in the winding in each phase, characterized in that the passages formed in the ferromagnetic or non-magnetic parts of the stack form orifices with an ~~for which the~~ internal section that ~~surrounds~~ a sliding element ~~each time,~~ wherein ~~and in that~~ the sliding elements (600) are rods each of which has an external periphery complementary to the internal section of the orifices through which they pass, wherein ~~such that~~ each rod (600) interacts magnetically with the ferromagnetic or non-magnetic part (500) through which its external periphery passes.

2. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 1, wherein ~~characterized in that~~ the orifices have a circular cross-section and each rod (600) is in the form of a rotating cylinder.

3. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 2, wherein ~~characterized in that~~ each of the rods includes ~~comprises at least~~ a longitudinal groove.

4. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 1 ~~any one of the previous claims~~, wherein the machine is adapted so ~~characterized in that~~ the number of phases is equal to q and each phase is offset from a ~~the~~ mobile part in the displacement direction by a distance such that each of the ~~their~~ magnetic fluxes is offset by a number equal to $N\pi/q$, where N is an integer.

5. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 1 ~~any one of the previous claims~~, wherein ~~characterized in that~~ each magnet (500) is formed by a ring surrounding a corresponding rod (600).

6. **(Currently Amended)** An electrical machine ~~Machine~~ according to any one of ~~claims 1 to 4~~, wherein ~~characterized in that~~ each magnet is formed by a magnetized plate (500) perpendicular to the displacement, provided with a series of orifices, so that ~~a~~ corresponding rod (600) may ~~passing~~ through each orifice.

7. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 1 ~~any one of the previous claims~~, wherein ~~characterized in that~~ each rod includes ~~is formed of~~ a central non-magnetic core and a series of alternately magnetic and non-magnetic rings ~~(620, 630)~~.

8. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 1 ~~any one of the previous claims~~, wherein ~~characterized in that~~ the machine it includes ~~comprises~~ one or more ~~several~~ annular and ~~possibly slit~~ positioning sensors (800) that include ~~;~~ ~~comprising~~ one or several windings, wherein the sensors are ~~being~~ fixed to the active part so that ~~and~~ one or several rods (600) of the passive part may ~~passing~~ through them.

9. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 8 ~~any one of the previous claims~~, wherein ~~characterized in that~~ each of the positioning sensors (800)

is located around a rod and offset in the direction of displacement of the active and passive parts with respect to each other.

10. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 1 ~~any one of the previous claims~~, wherein the machine includes ~~characterized in that it comprises~~ at least one device (710, 720) for collection of forces applied by at least one rod (600), wherein ~~the~~ this rod (600) and the ~~this device~~ are adapted to cooperate ~~cooperating~~ by applying a single-directional contact along a ~~the~~ tension direction of the rod, wherein ~~such that~~ the force collection device does not create any compression reaction on the rod.

11. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 10, wherein ~~characterized in that~~ there is a clearance between ~~under~~ the contacts of ~~between~~ the rods (600) and the force collection devices (710, 720).

12. **(Currently Amended)** An electrical machine ~~Machine~~ according to claim 10 ~~or claim 11~~, wherein ~~characterized in that~~ the force collection device (710, 720) is a transverse plate fixed to a main spindle of the machine (700), wherein ~~and in that~~ each rod (600) passes through the ~~this~~ plate (710, 720) and is provided with a bearing head (640, 650) in contact with the ~~this~~ plate (710, 720).

13. **(Currently Amended)** An electrical machine ~~Machine~~ according claim 1 ~~to any one of the previous claims~~, wherein ~~characterized in that~~ the rod(s) (600) ~~has~~ ~~(have)~~ a cross-section, wherein the circumference of a rod ~~which~~ forms a smooth line with no abrupt change of direction.